

## CLAIMS

I claim:

1. A rotary blade sharpener, comprising:  
a housing;  
a rotatable platen in said housing arranged to rotate about a vertical axis;  
an abrasive sheet on top of said platen; and  
a blade holder assembly positioned over said abrasive sheet, wherein said blade holder assembly includes a blade clamp for securing a blade against said abrasive sheet, said blade holder assembly is hinged to said housing for adjusting an angle between said blade and said abrasive sheet.
2. The rotary blade sharpener of claim 1, wherein said platen is arranged to rotate away from said blade for pulling said blade against said abrasive sheet.
3. The rotary blade sharpener of claim 1, wherein said abrasive sheet includes a pressure sensitive adhesive bottom surface, and further including a disc which is color coded to indicate a grit of said abrasive sheet, wherein said disc is positioned between said abrasive sheet and said platen.
4. The rotary blade sharpener of claim 1, wherein said abrasive sheet includes a pressure sensitive adhesive bottom surface, and further including a removable disc positioned between said abrasive sheet and said platen, wherein said abrasive sheet is adhered to said disc, and said disc is larger than said platen to enhance grip during removal of said disc.

5. The rotary blade sharpener of claim 1, further including a motor connected to said platen for rotating said platen at about 100 to 200 rpm for avoiding damaging a temper of said blade.
6. The rotary blade sharpener of claim 1, further including a lubricant container for dispensing a lubricant onto said abrasive sheet at a rate controlled by a valve connected to said container.
7. The rotary blade sharpener of claim 1, wherein said housing includes a surrounding wall completely surrounding said platen and extending above said abrasive sheet for catching lubricant flung from said abrasive disc.
8. The rotary blade sharpener of claim 1, further including a surrounding wall completely surrounding said platen and extending above said abrasive sheet for catching lubricant flung from said abrasive sheet, a cutout in said surrounding wall, and a collapsible molding in said cutout, wherein said molding is collapsible for enabling positioning said blade flat on said abrasive sheet through said cutout.
9. A rotary blade sharpener, comprising:  
a housing;  
a rotatable platen in said housing arranged to rotate about a vertical axis;  
an abrasive sheet on top of said platen;  
an adjustable support rack hinged to said housing over said platen for being adjustable in angle;  
and  
a jig movably positioned on said rack for securing a blade against said abrasive sheet, said jig is movable side-to-side in said rack for moving said blade radially across said abrasive sheet.

10. The rotary blade sharpener of claim 9, wherein said jig is comprised of a plate for supporting said blade, a cutout in said plate for providing clearance for a handle of said blade, and a clamp on said plate for tightening said blade against said plate.
11. The rotary blade sharpener of claim 9, wherein said platen is arranged to rotate away from said blade for pulling said blade against said abrasive sheet.
12. The rotary blade sharpener of claim 9, wherein said rack is comprised of sides connected by a transverse rail, and said jig includes a hook arranged to hook onto said rail.
13. The rotary blade sharpener of claim 9, wherein said abrasive sheet includes a pressure sensitive adhesive bottom surface, and further including a disc which is color coded to indicate a grit of said abrasive sheet, wherein said disc is positioned between said abrasive sheet and said platen.
14. The rotary blade sharpener of claim 9, wherein said abrasive sheet includes a pressure sensitive adhesive bottom surface, and further including a removable disc positioned between said abrasive sheet and said platen, wherein said abrasive sheet is adhered to said disc, and said disc is larger than said platen to enhance grip during removal of said disc.
15. The rotary blade sharpener of claim 9, further including a motor connected to said platen for rotating said platen at about 100 to 200 rpm for avoiding damaging a temper of said blade.
16. The rotary blade sharpener of claim 9, further including a lubricant container for dispensing a lubricant onto said abrasive sheet at a rate controlled by a valve connected to said container.

17. The rotary blade sharpener of claim 9, wherein said housing includes a surrounding wall completely surrounding said platen and extending above said abrasive sheet for catching lubricant flung from said abrasive sheet.
18. The rotary blade sharpener of claim 9, wherein said housing includes a surrounding wall completely surrounding said platen and extending above said abrasive sheet for catching lubricant flung from said abrasive sheet, a cutout in said surrounding wall, and a collapsible molding in said cutout, wherein said molding is collapsible for enabling positioning said blade flat on said abrasive sheet through said cutout.
19. A rotary blade sharpener, comprising:
  - a housing including a surrounding wall and an open top;
  - a platen positioned in said housing below said open top of said surrounding wall;
  - a removable disc on top of said platen;
  - an abrasive sheet with a pressure sensitive adhesive bottom surface adhered to said disc, wherein said disc is color coded to indicate a grit of said abrasive sheet; and
  - an adjustable support rack hinged to said housing over said platen for being adjustable in angle, wherein said rack is comprised of sides connected by a transverse rail;
  - a jig movably positioned on said rack, and said jig includes a hook arranged to hook onto said rail, said jig is comprised of a plate for supporting a blade against said abrasive sheet, a cutout for providing clearance for a handle of said blade, and a blade clamp with knobs for tightening said blade against said plate, said rack is adjustable in tilt to position said blade on said abrasive sheet, said jig is movable side to side on said rack for moving said blade radially across said abrasive sheet; and
  - a cutout in said surrounding wall for enabling positioning said blade flat on said abrasive sheet through said cutout.
20. The rotary blade sharpener of claim 19, wherein said platen is arranged to rotate away from said blade for pulling said blade against said abrasive sheet.

21. The rotary blade sharpener of claim 19, wherein said disc is larger than said platen to enhance grip during removal of said disc.
22. The rotary blade sharpener of claim 19, further including a motor connected to said platen for rotating said platen at about 100 to 200 rpm for avoiding damaging a temper of said blade.
23. The rotary blade sharpener of claim 19, further including a lubricant container for dispensing a lubricant onto said abrasive sheet at a rate controlled by a valve connected to said container.